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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/717,065
Filing Date: November 19, 2003
Appellant(s): RAI ET AL.

David J. Gaskey
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/16/2009 appealing from the Office action mailed 4/20/2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 2001/0021180 A1	Lee et al.	09-2001
US 2006/0114910 A1	Sindhushayana et al.	01-2006

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5, 6, 8 – 10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 2001/0021180 A1) in view of Sindhushayana et al. (US 2006/0114910 A1).

Regarding claim 1, Lee discloses providing at least one permanent virtual pipe on the high-speed forward channel for transmission of the data bursts (providing a supplemental channel (SCH) for high-speed transmission of data; Page 3, Paragraph 0048, lines 1 – 9); scheduling transmission of burst segments of the data bursts on the at least one permanent virtual pipe in a round-robin manner among different data bursts (scheduling transmission of burst segments of the data bursts on the SCH channel for a plurality of users); and transmitting the burst segments on the at least one virtual pipe in

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accordance with the scheduling (transmitting according to the scheduling) (Page 3, Paragraph 0048, line 14 through Page 4, Paragraph 0051, line 5).

However, Lee does not specifically disclose comprising a plurality of different width virtual pipes on the high-speed forward channel for transmission of the data bursts, at least one of the plurality of different width permanent virtual pipes being wider than another of the virtual pipes and at least one burst segment of each data burst being scheduled for transmission on the widest virtual pipe. In an analogous art, Sindhushayana teaches a plurality of different width virtual pipes (different data rates as shown in *Table 1*, wherein the forward link data rates vary from 38.4 kbps to 2.456 Mbps) on the high-speed forward channel for transmission of the data bursts (High Data Rate system having varying slot sizes as shown in *Table 1*), at least one of plurality of different width permanent virtual pipes being wider than another of the virtual pipes (at least one of the data rates being higher than another data rate, see *Table 1*) and at least one burst segment of each data burst being scheduled for transmission on the widest virtual pipe (the scheduling algorithm determines which remote station will be the recipient of the next packet recipient, in accordance with an *optimal forward link throughput level*; Page 4, Paragraphs 0044 – 0045). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Sindhushayana to the system of Lee for providing optimal forwarding link throughput level by utilizing a scheduler unit which can be configured to schedule a multi-slot packet transmission to a remote station in accordance with a scheduling algorithm to enhance system throughput (Page 2, Paragraph 0016).

Regarding claim 2, Lee discloses providing at least one permanent virtual pipe comprises provisioning predetermined channel resources to the at least one virtual pipe (Page 4, Paragraph 0052, lines 13 – 24).

Regarding claim 5, the combination of Lee and Sindhushayana, specifically Sindhushayana teaches scheduling transmission of the burst segments of a data burst amongst the different width virtual pipes in a round robin manner (the scheduling unit in the base station monitors the remote stations that are operating within its range and determines which remote station will be the next data packet recipient, in accordance with an optimal forward link throughput level; Paragraphs 0045 – 0046 and as it is shown in Table 1 different data rates are applied to different number of slots for transmitting data packet).

Regarding claim 6, Lee discloses wherein the base station operates in accordance with CDMA2000 standards (Page 3, Paragraph 0037, lines 1 – 3).

However, Lee as applied above does not specifically disclose that the virtual pipes are provided at widths chosen from among: 19.2kbps, 38.4kbps, 76.8kbps and 153.6kbps. In an analogous art, Sindhushayana teaches that the size of slots are related to data rates such as 38.4kbps, 76.8kbps and 153.6kbps and are chosen based on the scheduling algorithm. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Sindhushayana to the system of Lee for providing optimal forwarding link throughput level by utilizing a scheduler unit which can be configured to schedule a multi-slot

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packet transmission to a remote station in accordance with a scheduling algorithm to enhance system throughput (Page 2, Paragraph 0016).

Regarding claim 8, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 9, the combination of Lee and Sindhushayana, specifically Sindhushayana teaches a burst segment control means associated with the at least one permanent virtual pipe for storing when each burst segment is scheduled for transmission, the transmitting means transmitting a burst segment in response to a signal from said burst segment control means to transmit the burst when it is scheduled (the scheduling unit in the base station stores parameters to be used when transmitting multi-packets in accordance with an optimal forward link throughput level; Page 4, Paragraphs 0044 – 0047).

Regarding claim 10, the claim is interpreted and rejected for the same reason as set forth in claim 2.

Regarding claim 13, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 14, the claim is interpreted and rejected for the same reason as set forth in claim 6.

3. Claims 3, 7, 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Sindhushayana as applied to claim 2 above, and further in view of the admitted prior art (hereinafter APA).

Regarding claim 3, the combination of Lee and Sindhushayana does not specifically disclose wherein the predetermined channel resources comprises a predetermined number of contiguous Walsh codes and a predetermined amount of contiguous real estate on the base station's CDMA ASIC. In an analogous art, the APA clearly discloses the claimed limitation on Page 3, lines 4 – 10. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the necessary basic building blocks of the admitted prior art to the modified system of Lee and Sindhushayana for transmitting data at high speeds.

Regarding claim 7, the combination of Lee, Sindhushayana and the APA, specifically the APA teaches transmitting an ESCAM a predetermined time interval before transmitting a burst segment, the ESCAM providing information for receiving the burst segment (ESCAM is defined in the IS-2000 standard; Page 2, lines 13 – 22).

Regarding claim 11, the claim is interpreted and rejected for the same reason as set forth in claim 3.

Regarding claim 15, the claim is interpreted and rejected for the same reason as set forth in claim 7.

(10) Response to Argument

Appellant's remarks have been fully considered but they are deemed not persuasive for the following reasons.

In response to appellant's arguments that the combination of Lee and Sindhushayana fails to teach "*a plurality of different width virtual pipes on the high-speed forward channel for transmission of the data bursts, at least one of the plurality of different width permanent virtual pipes being wider than another of the virtual pipes and at least one burst segment of each data burst being scheduled for transmission on the widest virtual pipe.*" The examiner respectfully disagrees. According to appellant's specification and even in the background of the invention widths of the virtual pipes are represented as 2x, 4x, 8x, 16x in which each of those respectively equates to data rates i.e., 19.2kbps, 38.4kbps, 76.8kbps and 153.6kbps (Page 1, lines 15 – 18 and Page 10 lines 14 – 16 makes the comparison between an 8x and an 16x stating that the 8x virtual pipe can handle exactly half the data rate and Page 26, lines 2 – 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize and understand that the different widths of the virtual pipes equate to different data rates as shown in Table 1 of Sindhushayana. Furthermore, Sindhushayana teaches a plurality of different width virtual pipes (different data rates as shown in *Table 1*, wherein the forward link data rates vary from 38.4 kbps to 2.456 Mbps) on the high-speed forward channel for transmission of the data bursts (High Data Rate system having varying slot sizes as shown in *Table 1*), at least one of plurality of different width permanent virtual pipes being wider than another of the virtual pipes (at least one of the data rates being higher than another data rate, see *Table 1*) and at least one burst segment of each data burst being scheduled for transmission on the widest virtual pipe (the scheduling algorithm determines which remote station will be the

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recipient of the next packet recipient, in accordance with an *optimal forward link throughput level*; Page 4, Paragraphs 0044 – 0045 reads on scheduling and Page 5, Paragraphs 0047 – 0049 reads on determining **the maximum data transmission rate** that can be sustained for transmission).

In response to appellant's arguments with respect to claims 3, 7, 11 and 15, the examiner has shown above that the combination of Lee and Sindhushayana is no longer improper. Therefore, the combination of Lee and Sindhushayana and the admitted prior art clearly teaches all the limitations of claims 3, 7, 11 and 15, thus is proper.

Therefore, for the above reasons, the examiner respectfully submits that a *prima facie* case of obviousness has been set forth in the Final office action and appellant(s) has/have failed to overcome the *prima facie* case of obviousness.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/UN C. CHO/

Examiner, Art Unit 2617

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Conferees:

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